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Term	Documents
9 AND 10	1

Database: [All Databases \(USPT + EPAB + JPAB + DWPI + TDBD\)](#)

19 and 110

Refine Search:

Search History

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
ALL	19 and 110	1	L11
ALL	16 and 80-120	7	L10
ALL	16 and 120-156	1	L9
ALL	16 and ph sensitive	2	L8
ALL	12 and ph sensitive	7	L7
ALL	12 and sperm	45	L6
ALL	12 and slo3	1	L5
ALL	12 and slo2	0	L4
ALL	12 and slo1	0	L3
ALL	potassium channel	1316	L2
ALL	pottassium channel	1	L1

=> s potassium channel#

L1 70665 POTASSIUM CHANNEL#

=> s l1 and sperm

L2 108 L1 AND SPERM

=> s l2 and slo3

L3 6 L2 AND SLO3

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 2 DUP REM L3 (4 DUPLICATES REMOVED)

=> dl4 ibib aabs 1-2

DL4 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.
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=> dl4 ibib abs 1-2

DL4 IS NOT A RECOGNIZED COMMAND

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For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d l4 ibib abs 1-2

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1999:286077 CAPLUS

DOCUMENT NUMBER: 130:321586

TITLE: **Slo3**, a novel pH-sensitive **potassium**

channel from human and mouse spermatocytes

INVENTOR(S): Salkoff, Lawrence; Schreiber, Matthew; Silvia, Chris

PATENT ASSIGNEE(S): The Washington University, USA

SOURCE: PCT Int. Appl., 93 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9920754	A1	19990429	WO 1998-US22321	19981021

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ,

TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,

CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 AU 9911122 19990510 AU 1999-11122 19981021
 PRIORITY APPLN. INFO.: US 1997-63138 19971022
 US 1998-76172 19980227
 WO 1998-US22321 19981021

AB The invention provides isolated protein and cDNA sequences of **Slo3**, a pH-sensitive **potassium channel** with homol. to the large-conductance, calcium-activated Slo1 **potassium channel**. Unlike Slo1, **Slo3** channels are not gated by calcium, but they are regulated by intracellular pH and membrane potential. Since **Slo3** is primarily expressed in human and mouse testes, and because of its sensitivity to both pH and voltage, **Slo3** could be involved in **sperm** capacitation and/or the acrosome reaction. The invention also provides antibodies to **Slo3**, methods of screening for **Slo3** inhibitors, and methods of screening for **Slo3** homologs.

L4 ANSWER 2 OF 2 MEDLINE DUPLICATE 1
 ACCESSION NUMBER: 1998123127 MEDLINE
 DOCUMENT NUMBER: 98123127
 TITLE: **Slo3**, a novel pH-sensitive K⁺ channel from mammalian spermatocytes.
 AUTHOR: Schreiber M; Wei A; Yuan A; Gaut J; Saito M; Salkoff L
 CORPORATE SOURCE: Department of Anatomy, Washington University School of Medicine, St. Louis, Missouri 63110, USA.
 SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1998 Feb 6) 273 (6) 3509-16.
 Journal code: HIV. ISSN: 0021-9258.
 PUB. COUNTRY: United States
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals; Cancer Journals
 OTHER SOURCE: GENBANK-AF039213
 ENTRY MONTH: 199805
 ENTRY WEEK: 19980501

AB **Potassium channels** have evolved to play specialized roles in both excitable and inexcitable tissues. Here we describe the cloning and expression of **Slo3**, a novel **potassium channel** abundantly expressed in mammalian spermatocytes. **Slo3** represents a new and unique type of **potassium channel** regulated by both intracellular pH and membrane voltage. Reverse transcription-polymerase chain reaction, Northern analysis, and

in situ hybridization show that **Slo3** is primarily expressed in testis in both mouse and human. Because of its sensitivity to both pH and voltage, **Slo3** could be involved in **sperm** capacitation and/or the acrosome reaction, essential steps in fertilization where changes in both intracellular pH and membrane potential are known to occur. The protein sequence of mSlo3 (the mouse **Slo3** homologue) is similar to Slo1, the large conductance, calcium- and voltage-gated **potassium channel**. These results suggest that Slo channels comprise a multigene family, defined by a combination of sensitivity to voltage and a variety of intracellular factors. Northern analysis from human testis indicates that a **Slo3** homologue is present in humans and conserved with regard to sequence, transcript size, and tissue distribution. Because of its high testis-specific expression, pharmacological agents that target human **Slo3** channels may be useful in both the study of fertilization as well as in the control or enhancement of fertility.